

REMARKS

Claims 1-24 are pending in this application. No amendments are made.

Claim Rejection Under 35 U.S.C. §103 over Onomichi in view of Ito

Claims 1, 2, 4, and 13 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi (U.S. Patent Application Publication No. 2001/0005278) in view of Ito (U.S. Patent No. 6,699,580). Applicants traverse the rejections.

First, there is no motivation to combine Onamichi and Ito. Onamichi is directed to an filter that has absorption in the near-infrared region but high light transmission in the visible region. See abstract. Ito, on the other hand, is directed to a dispersion liquid composition for black matrix (which does not contain a dye for near-infrared ray absorption), which forms a light absorption layer on a glass panel. See abstract. One of ordinary skill in the art would not have been motivated to modify the filter disclosed in Onamichi, which requires high light transmission, using a polysiloxane disclosed in col. 5, lines 40-55 of Ito, which improves the homogeneity and uniform thickness of a black layer containing no dye for near-infrared ray absorption.

Further, there is no motivation to modify the surfactant disclosed in Onamichi using Ito. The nonionic surfactant disclosed in paragraph [0162] of Onamichi is used in an aqueous coating solution for a polymer easy adhesion layer. See paragraphs [0128] and [0162]. This polymer easy adhesion layer is placed between an infrared absorption layer and a transparent polymer film. The coating solution does not contain a dye, and is used to coat the surface of a polymer film. See paragraphs [0066] and [0128]. On the other hand, the polysiloxane disclosed in col. 5, lines 40-55 of Ito is used in a composition that contains light-absorbing dye(s), which is used to coat the surface of a glass panel. As such, one of ordinary skill art would not have been motivated to modify the surfactant disclosed in Onamichi by using the polysiloxane disclosed in Ito.

Additionally, even assuming, *arguendo*, that the polysiloxane disclosed in Ito were added to the composition of the infrared absorption layer disclosed in Onamichi, there still would have been no reasonable expectation of success. Because the surface tension of water is high, it is

conventional in the field that a surfactant is added to a water dispersion containing inorganic particles (such as manganese oxide and ferric oxide) to lower the surface tension in order to improve the coatability. Applicants point out that the dispersion liquid disclosed in Ito is based on water or a mixture of water and water-compatible organic solvent. See col. 5, lines 30-32. However, in Onamichi, to make the infrared absorption layer, only organic solvents, not water-based solvents, are used. See Table 1. It is not conventional in the field to add a surfactant to an organic coating solution. There is no reasonable expectation of success to apply a surfactant that works in a water-based solution to an organic solution. The inventors of the present invention, however, discovered that surprisingly, the addition of a surfactant having an HLB in the range of 2 to 12 and in a concentration of 0.01% to 2.0% by mass in the composition not only improves the coatability, but also improves the property of winding a film into a roll and suppresses the deterioration of the near-infrared ray absorbing dye. See page 55, line 21 – page 56, line 15 of the specification.

Moreover, Applicants point out that neither Onamichi nor Ito teaches or suggests a surfactant having an HLB in the range of 2 to 12 and at 0.01% to 2.0% by mass in the composition, as recited in independent claim 1, or relative to a solid content of the coating solution, as recited in independent claim 13. On the other hand, evidence of the importance of the HLB range of 2 to 12 is shown at least in page 58, line 19 – page 59, line 4 of the specification, and evidence of the importance of the concentration range of 0.01% to 2.0% by mass is disclosed in page 57, line 25 – page 58, line 13 of the specification.

For at least the reasons stated above, a *prima facie* case of obviousness had not been established. Withdrawal of the rejections is respectfully requested.

Claim Rejection Under 35 U.S.C. §103 over Onomichi in view of Ito as applied to claim 1 and further in view of other references

Claims 3 and 9 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Kuwabara

(U.S. Patent Application Publication No. 2002/0127395¹). Claim 5 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Sato (Japanese Patent Application 2004-202899). Claims 6 and 7 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Taki (U.S. Patent No. 6,703,138). Claim 8 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Oya (U.S. Patent Application Publication No. 2003/0186040). Claims 10 and 24 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Moriwake (U.S. Patent Application Publication No. 2003/0021935). Claims 11 and 12 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 1 and further in view of Kumano (Japanese Patent Application 2003-127310). Applicants traverse the rejections.

For the reasons stated above, claim 1 is not obvious over Onomichi in view of Ito. The deficiency of Onomichi in view of Ito is not cured by any of Kuwabara, Sato, Taki, Oya, Moriwake, Kumano, and combinations thereof because none of them suggests one of ordinary skill in the art to modify the near-infrared absorption filter of Onomichi with the polysiloxane disclosed in Ito. Therefore, withdrawal of the rejections is respectfully requested.

Claim Rejection Under 35 U.S.C. §103 over Onomichi in view of Ito as applied to claim 13 and further in view of other references

Claim 14 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 13 and further in view of Kubo (U.S. Patent No. 6,770,430). Claims 15 and 16 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito as applied to claim 13 and further in view of Ogawa (U.S. Patent Application Publication No. 2004/0071883). Applicants traverse the rejections.

¹ Applicants have found that US 2002/375766, as recited on page 4 of the Office Action, does not exist. Instead, US 2002/0127395 fits the description of Kuwabara.

For the reasons stated above, claim 13 is not obvious over Onomichi in view of Ito. The deficiency of Onomichi in view of Ito is not cured by any of Kubo and Ogawa at least because none of them suggests one of ordinary skill in the art to modify the near-infrared absorption filter of Onomichi with the polysiloxane disclosed in Ito. Therefore, withdrawal of the rejections is respectfully requested.

Claim Rejection Under 35 U.S.C. §103 over Onomichi in view of Ito and further in view of Kumano and other references

Claim 17 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito and further in view of Kumano. Claim 18 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito and in view of Kumano as applied to claim 17 and further in view of Iwasaki (U.S. Patent No. 4,948,635). Claim 19 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito and in view of Kumano as applied to claim 17 and further in view of Ogawa. Applicants traverse the rejections.

For the reasons stated above, there is no motivation combine Onomichi and Ito to reach a process for preparing a near-infrared ray absorption roll using a coating solution containing, among other things, a near-infrared ray absorption dye and a surfactant, as recited in independent claim 17, and evidence of the importance of the HLB range of 2 to 12 and the concentration range of 0.01% to 2.0% by mass is disclosed in the specification. The deficiency of Onomichi in view of Ito is not cured by any of Kumano, Iwasaki, Ogawa, and combinations thereof at least because none of them suggests one of ordinary skill in the art to modify the near-infrared absorption filter of Onomichi with the polysiloxane disclosed in Ito.

Therefore, withdrawal of the rejections is respectfully requested.

Claim Rejection Under 35 U.S.C. §103 over Onomichi in view of Ito and further in view of Iwasaki and other references

Claims 20 and 21 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito and further in view of Iwasaki. Claim 22 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito

and in view of Iwasaki as applied to claim 20 and further in view of Ogawa. Claim 23 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Onomichi in view of Ito and in view of Iwasaki as applied to claim 20 and further in view of Kubo. Applicants traverse the rejections.

For the reasons stated above, there is no motivation combine Onomichi and Ito to reach a process for preparing a near-infrared ray absorption roll using a coating solution containing, among other things, a near-infrared ray absorption dye and a surfactant, as recited in independent claim 20, and evidence of the importance of the HLB range of 2 to 12 and the concentration range of 0.01% to 2.0% by mass is disclosed in the specification. The deficiency of Onomichi in view of Ito is not cured by any of Kumano, Iwasaki, Ogawa, and combinations thereof at least because none of them suggests one of ordinary skill in the art to modify the near-infrared absorption filter of Onomichi with the polysiloxane disclosed in Ito.

Therefore, withdrawal of the rejections is respectfully requested.

CONCLUSION

Applicant asserts that all of the stated grounds of rejection have been properly traversed. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

In the event the filing of this paper is deemed not timely, applicant's petition for an appropriate extension of time. The petition fee, if needed, can be charged to deposit account number 11-0600.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Kenyon & Kenyon LLP Deposit Account No. **11-0600**.

The Examiner is invited to contact the undersigned at the telephone number below to discuss any matter concerning this application.

Respectfully submitted,

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